

Lake Superior State
Forest Sustainable
Forest Management
Pilot Project

REPORT

2



An Assessment of the Michigan Department of Natural Resources' Commitment to Sustainable Forest Management

Anne Hayes
Tom Clark
Craig Howard

F e b r u a r y 2 8 , 1 9 9 9

Table of Contents

1. Introduction	1
2. Legislation.....	2
3. Vision and Mission Statements	3
4. Resource Management Plans.....	4
5. Codes of Management Practice	6
6. Policy Statements	7
7. Implementation of Mission and Policy Statements.....	8
8. Conclusions.....	14
References Cited.....	16
Appendix 1. Enabling legislation.....	18
Appendix 2. Partial list of U.S. Fish and Wildlife Service Habitat Suitability Index Models that are used by the MDNR	20
Appendix 3. Descriptions of policies relevant to SFM.....	22
Appendix 4. Policies and procedures that show commitment to SFM according to CSA standards.	26
Appendix 5. Evaluation of MDNR mission statements by MDNR staff.....	32
Appendix 6. Evaluation of MDNR policies and procedures by MDNR staff	34

List of Tables

Table 1. How departmental mission statements and their themes affect the daily work of MDNR staff (1: A lot; 5: Not at all).	10
--	----

Table 2. Out of nine MDNR staff, the number that identified departmental mission statements as either “relevant” or “not relevant”	10
--	----

List of Figures

Figure 1. A summary of the enabling legislation demonstrating MDNR’s commitment to sustainable forest management.....	3
--	---

Figure 2. Michigan DNR mission statements.....	5
--	---

1. Introduction

Sustainability became a powerful bio-political concept during the Earth Summit in Rio de Janeiro in 1992. Although the concept was not new, the summit galvanized world opinion and gave some legal force to the initiative. The definition of "sustainable use" that came from the Rio convention is: *the use of components of biological diversity in a way and at a rate that does not lead to the long-term decline of biological diversity, thereby maintaining its potential to meet the needs and aspirations of present and future generations.*

Seven years after the convention people are still struggling to know what this means in practical terms. One key development has been that people want evidence that society is working towards this goal. They want written commitment that is supported by actions.

There have been several concurrent movements towards the development of independent mechanisms which can certify that resource management is sustainable. For forest resources, two principal systems that have emerged are from the Canadian Standards Association (CSA) and the Forest Stewardship Council (FSC). A central feature for both of these systems is the need for the owners of a forest to show a long-term commitment to sustainable forest management (SFM).

Although some guidance is provided at a high level by documents such as the Rio Convention, sustainability is a local phenomenon. In other words, it is people's actions on their own forest lands that determine sustainability.

Both the CSA and FSC systems require that local commitment to sustainability be demonstrated. Specifically, in Section 6.2.1 of CSA Z809-96 (CSA 1996), CSA requires "...evidence that

- a) *vision, mission, guiding principles, and codes of management practice exist...;*
- b) *the...senior governing body has approved the policy statements;*
- c) *the policy statements contain a commitment to*
 - i. *achieve and maintain sustainable forest management;*
 - ii. *meet or exceed all regulatory standards, policies, and interpretation requirements;*

- iii. act responsibly as forest managers or owners through stewardship in sustainable forest management with respect to all forest values and social values;*
- iv. provide for public participation in the setting of sustainable forest management objectives, goals, and indicators to integrate into forest management recognized social values and the concerns of the public;*
- v. provide participation opportunities for Aboriginal peoples with respect to their rights and interests in sustaining the forest;*
- vi. provide conditions and safeguards for the health and safety of employees and the public;*
- vii. encourage research on the forest and on sustainable forest management, and to monitor improvements in science and technology, and incorporate them where applicable..."*

As part of the Lake Superior State Forest Sustainable Forest Management Pilot Project, designed to assist the Michigan Department of Natural Resources (MDNR) in the development of a SFM planning system for the Lake Superior State Forest (LSSF), we reviewed MDNR's written commitment to sustainability and based our evaluation on the CSA requirements. This report summarizes the results of that evaluation. It discusses the legislation and guidelines that are relevant to SFM for the LSSF. It evaluates how the MDNR's vision, mission and policy statements reflect its commitment to SFM, and how MDNR staff regard the usefulness of current departmental mission and policy statements.

2. Legislation

An overview of the enabling legislation that addresses MDNR's commitment to SFM is presented in Figure 1. The MDNR's commitment to SFM at the legislative level appears to rest mainly in the Natural Resources and Environmental Protection Act (Act 451 Public Acts of 1994). This is a consolidation of earlier legislation. There are other pieces of legislation that are administrative in nature. As part of a review for certification purposes, using either CSA or FSC standards, it is important to show that legislation makes provisions for SFM. The relevant legislation we have reviewed is summarized in Appendix 1.

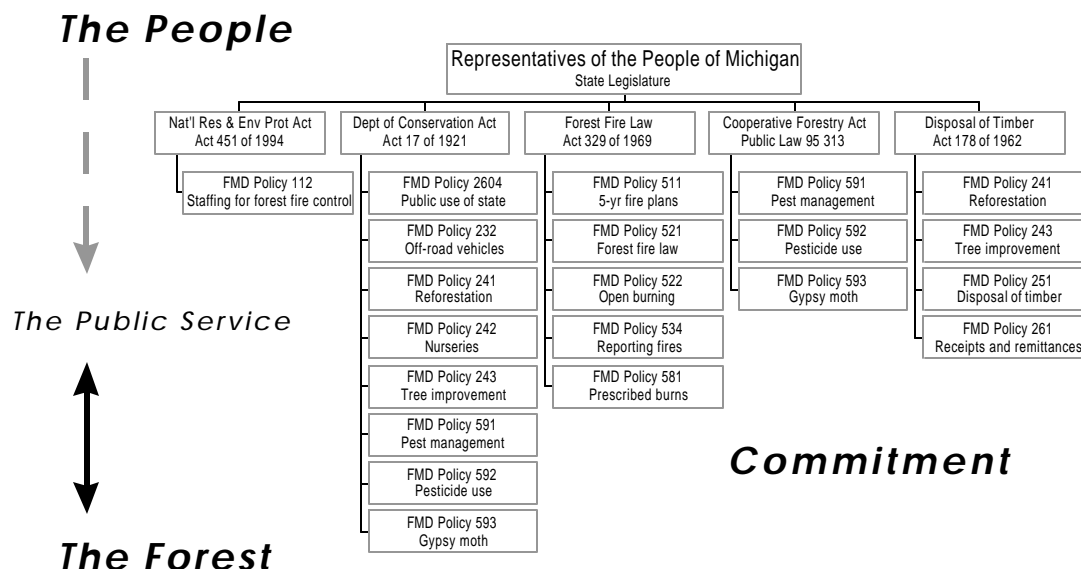


Figure 1. A summary of the enabling legislation demonstrating MDNR's commitment to sustainable forest management

3. Vision and Mission Statements

One indicator of how the legislative framework is applied within MDNR is the presence of vision and/or mission statements, along with associated goals and objectives. This collection of documentation is sometimes referred to as a strategic plan. Strategic plans outline guiding principles and can be important measures of whether the intentions of the forest owners have been communicated to the people doing the work. Both the Forest Management and Fisheries Divisions have strategic plans (Forest Management Division Strategic Planning Group and Foster 1996; MDNR 1994a) that provide each division with a main focus and give them long-term direction. The Wildlife Division has an informal document that outlines its mission statement, goals, and values.

In the large and complex bureaucratic systems that are typical of governments today, vision statements and mission statements are one way for legislators and senior public servants to convey the intent of the

legislation to internal and external stakeholders. The mission statements of MDNR and its three divisions are shown in Figure 2, and they clearly reflect MDNR's commitment to SFM.

The MDNR document entitled *A Joint Venture* (MDNR 1997a) was the source for the overarching mission statement. The divisional statements came from three very different document formats: Forest Management Division - *Strategic Plan* (Forest Management Division Strategic Planning Group and Foster 1996); Wildlife Division - an informal document outlining the Division's missions statement, goals and values; and Fisheries Division - *Fisheries Division Management Plan Fiscal year 1996-97* (MDNR Fisheries Division web page). Although the statements appear in other documents, the different vehicles used to communicate the divisional mission statements suggests that the divisions have a lot of autonomy. Although this is not the case in practice, it appears that way on paper.

It is important that the divisions are not working at cross purposes with respect to SFM. In terms of "commitment", this means that all resources and stakeholders must be given a fair consideration in allocation. The forest owners must be seen to be committed to fair treatment of all stakeholders. The undertaking of the *Joint Venture* (MDNR 1997a; MDNR 1998), the process by which MDNR is attempting to achieve its goal of the holistic management of Michigan's natural resources, is evidence that the department is committed to a collaborative, multi-divisional approach to resource management. Evidence of this collaboration is obvious on the MDNR web page where the divisional mission statements are presented together. It would be beneficial to the department if the divisional mission statements appeared in a similar format in a paper document that reflected the collaborative efforts of the Forest Management, Wildlife and Fisheries Divisions.

Section 7 examines how the departmental and divisional mission statements relate to the work being done on the ground by MDNR staff.

4. Resource Management Plans

Resource management plans are another important component of MDNR's commitment to SFM. Currently, forest and wildlife management operations are planned at the compartment level. As well, two plans were recently approved by the Natural Resources Commission (NRC). The

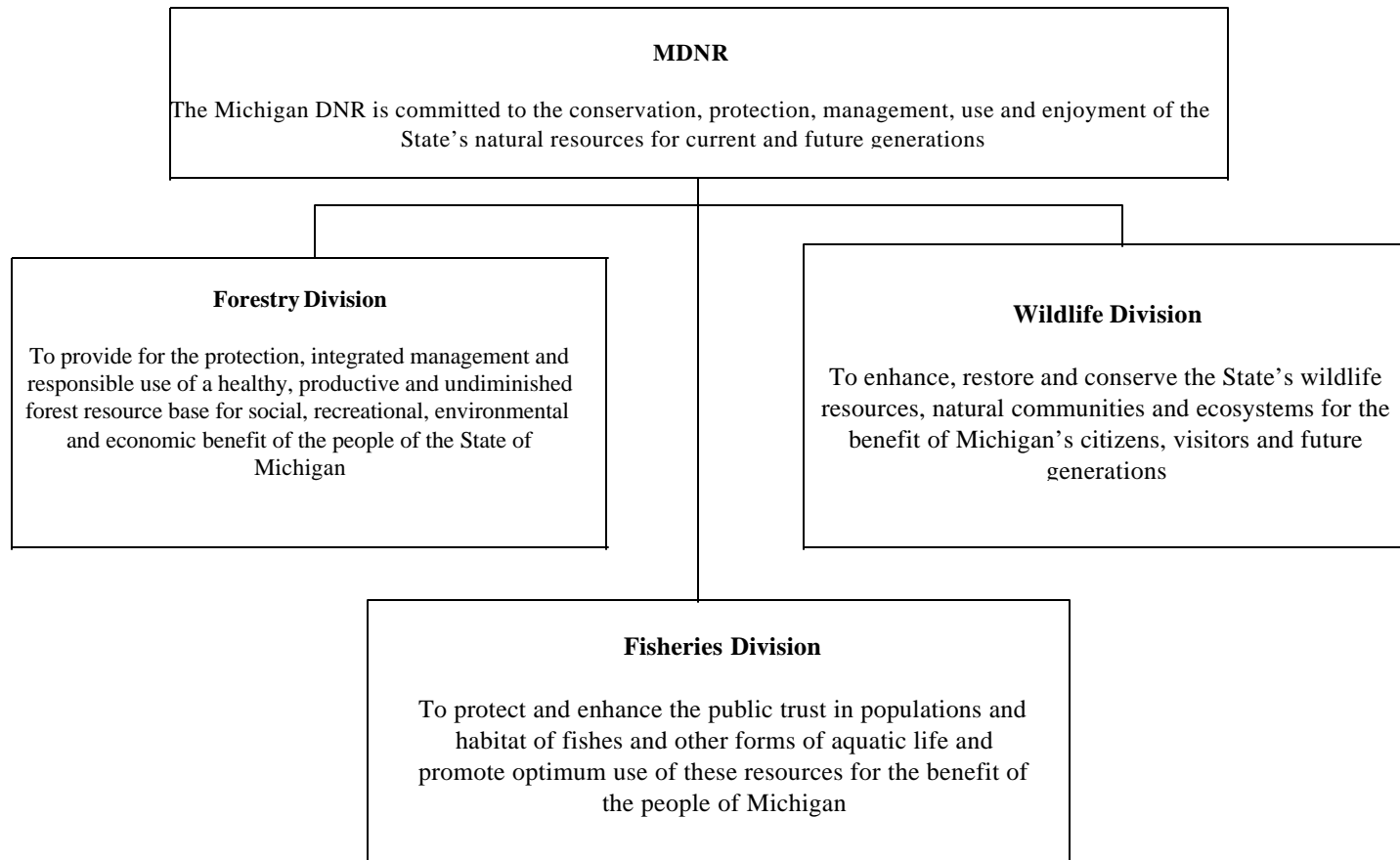


Figure 2. Michigan DNR Mission Statements

Escanaba River State Forest Comprehensive Resource Management Plan was completed in 1991 (MDNR 1991), and the Resources Management Plan for the Pere Marquette State Forest (District 6) was completed in 1994 (MDNR 1994b). An internal review of these plans was conducted by Leefers (1995). As Leefers describes in his report, the plans have some shortcomings, but the experience gained in preparing the plans and the plans themselves are good sources of information for future planning efforts.

In addition to the above-mentioned plans, a management plan for the Munuscong Wildlife Area was completed in 1995. The plan provides information on coastal wetland, upland grassland, and forest management, and specifies that, "...*management efforts will concentrate on restoring and retaining naturally functioning systems which are sustainable...*" (MDNR 1995).

The proposed planning system (Callaghan *et al.* 1999) developed for the LSSF through the LSSF SFM Project attempts to incorporate the various aspects of SFM. The plan should be the most visible and important expression of SFM. It should be the place where field staff, managers and the public can find guidance for the day-to-day decisions that are consistent with the statewide strategic plans.

5. Codes of Management Practice

CSA specifies that one way commitment to SFM can be shown is through the existence of codes of management practice. Currently, MDNR does not have many guidelines for management practices. One key one, however, is the *Water Quality Management Practices on Forest Land* (MDNR 1994c) which "...*serves as a guide for owners of forested land, describing responsible actions necessary to maintain the high quality water normally associated with their land.*"

As stated in FMD Policy 251 (Disposal of Timber), the MDNR generally uses the U.S. Forest Service Management Guides, although in recent years, the Department has been preparing its own. The Wildlife and Forest Management Divisions jointly prepared *the Visual Management Handbook - An Update* in 1997 (MDNR 1997b) and *A Guide to Managing Northern Hardwoods on Michigan State Forests* was completed in 1994 (Botti 1994). Work is currently under way to prepare guides for red pine, jack pine and lowland conifers. Because management guidelines are so important for the people doing work on the ground, as well as for maintaining credibility with

the public, we recommend that MDNR's effort to prepare its own management guidelines be aggressively pursued.

The MDNR also uses Habitat Suitability Index Models prepared by the U.S. Fish and Wildlife Service. A partial list of those guidelines used by the MDNR is provided in Appendix 2.

6. Policy Statements

In the day-to-day management of forests, policy and procedures documentation is of greater significance than mission and vision statements, or other parts of the strategic plan. Policies should reflect the higher-level legislation and strategic plans. To do that, they should express clearly and simply the wishes of the forest owners, they should be revised and reviewed regularly, and they should be familiar to the field staff responsible for implementing them. In Appendix 3, we have summarized the relevant NRC policies and those from the Forest Management Division (FMD) policy manual. In Appendix 4, we have evaluated these policies according to the standards of the CSA system (section 6.2.1 CSA Z809). Along the top of the table are the main elements from the commitment section of the CSA system. The policies are listed in the first column and the body of the table specifies the sections of the policies that are pertinent to each of the CSA elements. From our review of these policies and procedures, it is clear that there is a basic framework for SFM.

Although the framework is there, some problems need to be addressed regarding MDNR policy. Most of MDNR's policies and procedures have not been reviewed and updated since the late 1970s or early 1980s. To make the policies more relevant and useful for day-to-day activities, they should be reviewed and, if necessary, modified on a regular basis.

Commission Policy 2207 requires that management plans be developed, and Procedure 2207.7 outlines factors to be considered in the preparation of a plan. To date, this policy has not been well-implemented because of a lack of funding and direction and the absence of a formal planning system. Policy 2207 should be reviewed and updated. Leefers (1995) suggests how to modify the policy so that it reflects the multi-divisional approach to planning and integrates the multi-ownership quality of the forest.

MDNR policies need to be approved by the NRC, and that approval should be clearly stated in the policies themselves. NRC Policy 2207, for example, states, "*Adopted by the Natural Resources Commission May 11, 1979*". However, most of the policies we reviewed do not indicate that they have been approved by the NRC.

7. Implementation of Mission and Policy Statements

Mission statements and, more importantly, policy statements should be familiar to the field staff responsible for implementing them. According to the CSA system (section 6.2.1 CSA Z809), policy statements should be documented, communicated, and made readily available to internal and external stakeholders. The existence of mission statements and policies and procedures related to SFM is one level of commitment to SFM, but the incorporation of those documents into the daily activities of MDNR staff is also an important indication of commitment to SFM.

To determine how familiar staff are with the mission statements, policies and procedures of the MDNR, and how such documentation affects their daily work, a workshop with MDNR staff was held on March 31, 1998 in Newberry, Michigan. There were 17 staff members at the workshop, representing the Forest Management, Wildlife and Fisheries Divisions of the MDNR.

Objectives

The workshop had two objectives:

1. to permit MDNR staff to comment on how well departmental legislation, mission statements, vision statements, and policies are understood and regarded by staff.
2. to enable MDNR staff to identify gaps in the MDNR's regulatory structure with respect to implementing SFM.

Part 1: Mission Statements

Workshop participants were divided into two groups and asked to review the mission statements of MDNR, FMD, and the Wildlife and Fisheries

Divisions (Figure 2). Participants were asked to rate the statements on scales of 1-5 according to the following questions:

1. How familiar are you with each statement? (1: Very familiar; 5: Never heard of it)
2. How well do you understand each statement? (1: Very well; 5: Not at all)
3. How much does each mission statement affect your daily work? (1: A lot; 5: Not at all)
4. Could the mission statements be more relevant? (1: Could be more relevant; 5: Relevant as is)

Responses to these questions by all the participants are summarized in the four tables found in Appendix 5. Over all, staff at the workshop were quite familiar with the MDNR mission statement. Staff from the FMD were quite familiar with their division's mission statement, but were less familiar with the mission statements of the Wildlife and Fisheries Divisions. Similarly, staff from the Wildlife and Fisheries Divisions were very familiar with the mission statements of their divisions, but less familiar with that of the FMD. The fact that staff were familiar with the mission statements of their own divisions demonstrates focus and good communication within the divisions. It is not surprising that statements from divisions other than their own were not as familiar to staff; however, it would benefit the department as a whole if the mission statements of all the divisions were familiar to all staff.

The mission statements for the MDNR and the Forest Management and Wildlife Divisions were very well understood by all staff. The Fisheries mission statement was less well understood. In particular, concern was voiced by several workshop participants about the inclusion in the Fisheries mission statement of the phrase "To protect and enhance the public trust...". As a result of the comments made during the workshop, we suggest that it would be worthwhile reviewing and modifying the Fisheries Division mission statement.

The mission statements appear to have a moderate effect on daily work activities. The average rankings for this question were 2 for the MDNR and FMD mission statements, 3 for the Wildlife mission statement and 4 for the Fisheries mission statement. As part of their summary for this question, Group 2 split the question into two parts. The first part dealt with how the actual statements affected their daily work, and the second with how the themes around the statements affected their daily work. For each mission statement, the group reached a consensus on the two responses, and the results are outlined in Table 1. Although the actual statements moderately

affected daily activities, the themes that surround the statements appeared to affect work activities a great deal.

Table 1. How departmental mission statements and their themes affect the daily work of MDNR staff (1: A lot; 5: Not at all).

Department/Division	Actual statement	Themes
MDNR	3	1
Forest Management Division	3	1
Wildlife Division	4	1
Fisheries Division	5	3

As part of its review of the mission statements, Group 1 identified whether or not each statement is relevant. The results are outlined in Table 2. It appears that the members of Group 1 found the mission statements of the MDNR and the FMD to be relevant, and those from the Wildlife and Fisheries Divisions to be less so.

Table 2. Out of nine MDNR staff, the number that identified departmental mission statements as either "relevant" or "not relevant".

Department/Division	Relevant	Not relevant
MDNR	8	1
Forest Management Division	7	2
Wildlife Division	4	5
Fisheries Division	3	6

Reported below are comments received from members of each group regarding how the four mission statements could be made more relevant.

General comments

- Mission statements should be reviewed and related to work regularly.
- These are good "bullet" statements reflecting the way in which we operate as an organization and as entities within the organization. They help both staff and the public to understand our overall mission.

MDNR

- Difficult standard to meet daily in individual work, but general and adequate statement.
- Quite relevant but could use a regular reminder.
- Is clear and can be understood by the public/user/protector of our resources - although it is a difficult task to accomplish.
- What is the "social" aspect?

Forest Management Division

- Need to see/hear about mission more often.
- Add a statement to the effect of "...within present political reality..."
- Should include more total resource - wildlife, water, fisheries, etc.
- What is the "social" aspect?

Wildlife Division

- Could use regular reminder to help maintain employee focus.
- Add a statement to the effect of "...within present political reality..."
- What does "restore" imply and when does it stop?
- To be more relevant, should include more economic and social values.
- What is the "social" aspect?

Fisheries Division

- "To protect and enhance the *public trust*..." is a questionable phrase to use as a mission statement.
- Add a statement to the effect of "...within present political reality..."
- Should include more watershed issues.
- What is the "social" aspect?

In addition to ranking the mission statements, participants were invited to provide additional comments:

- Mission statements are available to those employees who are interested, but supervisors need to stress their importance to new employees.
- Daily work is guided by the policies that are formed on the basis of these mission statements.
- Interpretation of mission statements may vary among individuals.

- Since DNR is one organization, the divisions should unify and integrate missions. Personnel from each division should know where to find, and be familiar with, the mission statements of the other divisions. It would help personnel to do their jobs better if they knew the goals of the other divisions (in addition to having person-to-person communication). Hopefully the Joint Venture policy will integrate all land and water management.

Part 2. Policies and Procedures

The two groups were asked to review the policies and procedures listed in Appendix 3 and rate them on scales of 1-5 based on the following questions:

1. How familiar are you with each statement? (1: Very familiar; 5: Never heard of it)
2. How well do you understand each statement? (1: Very well; 5: Not at all)
3. How much does each policy statement affect your daily work? (1: A lot; 5: Not at all)

Participants were also asked to identify which policies/procedures are the most useful to them. Responses to these questions from all the participants are summarized in the four tables found in Appendix 6.

More than half of the participants indicated that they are quite familiar with the Disposal of Timber policy (FMD Policy 251, April 1, 1994) and the Equipment Preventive Maintenance policy (FMD Policy 611, December 1, 1981). However, staff are most familiar with policies and procedures related to fire laws, including the following:

- ◇ Burning - Prescribed (Commission Policy 4208, January 1, 1977)
- ◇ Prescribed Burning (FMD Policy 581, December 1, 1981)
- ◇ 5-Year Unit Fire Management Plans (FMD Policy 511, December 1, 1981)
- ◇ Forest Fire Law (FMD Policy 521, December 1, 1981)
- ◇ Control of Open Burning (FMD Policy 522, December 1, 1981)
- ◇ On-duty Staffing of Field Offices for Forest Fire Control (FMD Policy 112, December 1, 1981)
- ◇ Reporting of Going Fires (FMD Policy 534, December 1, 1981)

Of these policies, the Forest Fire Law, Control of Open Burning and the two Prescribed Burning policies were also identified by a majority of the

participants as being some of the most useful. Staff also identified the Safety Policy - Forest Management Division (FMD Policy 121, December 1, 1981) and the Disposal of Timber policy (FMD Policy 251, April 1, 1994) as being particularly useful.

Most of the participants were not familiar with the following four policies:

- ◇ Environmental Protection and Economic Development (Commission Policy 2002, March 11, 1993)
- ◇ Reforestation (Commission Policy 2204, January 1, 1977)
- ◇ Forest Research and Experimentation (FMD Policy 271, July 1, 1983)
- ◇ Gypsy Moth Management Policy (FMD Policy 593, September 8, 1988)

The policies and procedures that were reviewed are well understood by the staff.

In terms of how the policies and procedures affect the daily work of staff, the seven policies listed below appear to have the most impact:

- ◇ Management of State Forests (Commission Policy 2207, May 11, 1979)
- ◇ Forest Management (Department Procedure 2207.7, June 9, 1978)
- ◇ Lands - Public Use of State Lands Other than Parks and Recreation Areas (Commission Policy 2604, January 1, 1977)
- ◇ Burning - Prescribed (Commission Policy 4208, January 1, 1977)
- ◇ Safety Policy - Forest Management Division (FMD Policy 121, December 1, 1981)
- ◇ Prescribed Burning (FMD Policy 581, December 1, 1981)
- ◇ Disposal of Timber (FMD Policy 251, April 1, 1994)

Four policies were identified by most of the staff as not being particularly useful to their daily work:

- ◇ Gypsy Moth Management Policy (FMD Policy 593, September 8, 1988)
- ◇ School and Municipal Forests (FMD Policy 341, July 1, 1983)
- ◇ Safe Suppression of Power Line and Energized Area Fires (FMD Policy 543, December 1, 1981)
- ◇ Use of Respirators (FMD Policy 123, September 8, 1988)

Although the majority of the staff did not find that these four policies affected their daily activities, each affected the daily work of at least one staff member very much, indicating that different duties in the department require the knowledge and use of different policies and procedures.

8. Conclusions

The findings in this report indicate that generally MDNR has the appropriate documentation to support its commitment to SFM. The enabling legislation we reviewed makes provisions for SFM, and the MDNR and its Forest Management, Wildlife and Fisheries Divisions have appropriate mission or vision statements. Some codes of management practices are in place, and it is planned that more will be developed.

Over all, MDNR's mission statements and policies related to SFM are well understood by staff members, which speaks to MDNR's commitment to SFM. There is a sense that the divisional mission statements should be communicated more effectively among divisions. At the workshop with MDNR staff, some policies were identified as being more useful than others, particularly those related to fire issues, but each policy was identified by at least one staff member as greatly affecting his or her daily work. It was suggested that departmental policies would be more relevant to the staff if they were reviewed regularly. As well, it was suggested that supervisors should ensure that new employees are made aware of MDNR's mission statements and policies and procedures.

Of the 33 policies we reviewed, the large majority were from the FMD. There seems to be a lack of wildlife and fisheries policies. Guidance for wildlife and fisheries staff seems to come mainly in the form of a mentoring process and from time spent on the job. However, two key policies were identified at the workshop that are relevant to SFM and provide clear guidelines on some wildlife and fisheries issues. The policy entitled Natural Rivers (Commission Policy 2703, March 9, 1978) and its related procedure (Department Procedure 2703.3, March 9, 1978) and the policy entitled Wilderness and Natural Areas (Commission Policy 2704, June 8, 1979) were added to Appendices 3 and 4 following the workshop with MDNR staff.

Public participation, which speaks to MDNR's commitment to SFM, was identified by the participants in the workshop as a problem area for the Department. The public attends meetings related to wildlife, but not meetings related to, for example, forest planning. It was suggested that educating the public on what the Department does and why would likely result in more public involvement in open houses/public meetings. It was also suggested that the Department make open houses more accessible to the public. It is encouraging that workshop participants noted that the public feels comfortable talking to staff in MDNR offices, and approaching staff in the field. Informal interaction with the public is an important

component of public participation. The topic of public participation is reviewed more closely in the LSSF SFM Project document entitled *Public Participation in Forest Management Planning in LSSF: Finding the Right Pathway* (Clark *et al.* 1999). As part of the LSSF SFM Project, we held a series of workshops with the stakeholders of the LSSF and were very impressed with the level of commitment we observed from both internal and external stakeholders.

Although generally MDNR has the appropriate documentation to support its commitment to SFM, improvement in certain areas would strengthen MDNR's written commitment. Outlined below are some recommendations for how MDNR could improve its written commitment to SFM:

- Divisional mission statements should be presented together in a paper document to emphasize the collaboration between the Forest Management, Wildlife and Fisheries Divisions.
- Mission and policy statements should be reviewed and updated regularly.
- More policies should be developed to reflect the practices related to wildlife and fisheries.
- Policy statements need to be approved by the NRC and approval should be clearly stated on the policies.
- NRC Policy 2207 should be updated to reflect MDNR's multi-divisional approach to planning and the multi-ownership quality of the forest.
- MDNR should continue its efforts to prepare its own management guidelines.

References Cited

Botti, B [Ed.]. 1994. A Guide to Managing Northern Hardwoods on Michigan State Forests. Forest Management Division, Michigan Department of Natural Resources. 33 p.

Callaghan, B., T. Clark, C. Howard, and A. Hayes. 1999. A Forest Management Planning Guide for the Lake Superior State Forest. Report #13 from the Lake Superior State Forest Sustainable Forest Management Pilot Project. 89 p.

Canadian Standards Association. 1996. CAN/CSA-Z809.96. A Sustainable Forest Management System: Specifications Document. 12 p.

Clark, T., C. Howard, and A. Hayes. 1999. Public Participation in Forest Management Planning in the Lake Superior State Forest: Finding the Right Pathway. Report #6 from the Lake Superior State Forest Sustainable Forest Management Pilot Project. 23 p.

Forest Management Division Strategic Planning Group and W.A. Foster. 1996. Strategic Plan. Forest Management Division, Michigan Department of Natural Resources. 10 p.

Leefers, L.A. 1995. Review of State Forest Planning in Michigan: Findings and Recommendations. Report prepared for: Forest Planning Section, MDNR Forest Management Division. 35 p.

Michigan Department of Natural Resources. Fisheries Division Web Page - <http://www.dnr.state.mi.us/dept/mgmtplan/mgmtfish.htm>.

Michigan Department of Natural Resources. MDNR Web Page - <http://www.dnr.state.mi.us>

Michigan Department of Natural Resources. 1991. Escanaba River State Forest Comprehensive Resource Management Plan. 163 p.

Michigan Department of Natural Resources. 1994a. Fisheries Division Strategic Plan. Fisheries Division, Michigan Department of Natural Resources. 139 p.

Michigan Department of Natural Resources. 1994b. Resources Management Plan for the Pere Marquette State Forest District 6. 99 p.

Michigan Department of Natural Resources. 1994c. Water Quality Management Practices on Forest Land. 77 p.

Michigan Department of Natural Resources. 1995. Munuscong Wildlife Area Management Plan: An Ecosystem Conservation and User Accommodation Approach. Wildlife Division, Michigan Department of Natural Resources. 16 p.

Michigan Department of Natural Resources. 1997a. A Joint Venture. 9 p.

Michigan Department of Natural Resources. 1997b. Visual Management Handbook - An Update. Wildlife Division and Forest Management Division, Michigan Department of Natural Resources. 7 p.

Michigan Department of Natural Resources. 1998. Draft: Internal Communications Plan: MDNR Joint Venture. 4 p.

Appendix 1. Enabling legislation

Number	Title	Description	Associated policies
Act 17, Public Acts of 1921		An act to provide for the protection and conservation of the natural resources of Michigan.	Commission Policy 2604 FMD Policy 232 FMD Policy 241 FMD Policy 242 FMD Policy 243 FMD Policy 591 FMD Policy 592 FMD Policy 593
Act 39, Public Acts of 1978	Michigan Vehicle Code		FMD Policy 611 FMD Policy 621
Public Act No. 80 of 1986		Places specific requirements on management to inform employees of hazardous materials in the work place and how to work safely with these materials.	FMD Policy 122
Act 154, Public Acts of 1974	Michigan Occupational Safety and Health Act		FMD Policy 621
Act 178, Public Acts of 1962		An act authorizing and empowering the director of conservation to dispose of timber from state lands under the control of the Department of Conservation.	FMD Policy 241 FMD Policy 243 FMD Policy 251 FMD Policy 261
Act 217, Public Acts 1931	Municipal or Community Forest Act	Authorizes counties, townships, cities, villages and school districts to establish and maintain forests.	FMD Policy 341
Act 319, Public Acts 1975		Charges the MDNR with the responsibility to regulate use of off-road vehicles and to provide a recreational facility for that use.	FMD Policy 232
Act 329, Public Acts of 1969	Forest Fire Law	An act to provide for the protection of forests and forest values.	FMD Policy 511 FMD Policy 521 FMD Policy 522 FMD Policy 534 FMD Policy 581
Act 348, Public Acts of 1965	Air Pollution Control Act		FMD Policy 522

[cont'd]

Appendix 1. Enabling legislation

Number	Title	Description	Associated policies
Act 451, Public Acts of 1994	Natural Resources and Environmental Protection Act		FMD Policy 112
Public Law 95-313	Cooperative Forestry Assistance Act of 1978		FMD Policy 591 FMD Policy 592 FMD Policy 593
MDNR Director's Letter No. 16, Office of Environmental Affairs, Safety and Health			FMD Policy 123

Appendix 2. Partial list of U.S. Fish and Wildlife Service Habitat Suitability Index Models that are used by the MDNR

Allen, A.W. 1983. Habitat suitability index models. Beaver. U.S. Fish Wildl. Serv. FWS/OBS-82/10.30 Revised. 20 pp.

Allen, A.W. 1983. Habitat suitability index models. Fisher. U.S. Fish Wildl. Serv. FWS/OBS-82/10.45 Revised. 19 pp.

Allen, A.W. 1986. Habitat suitability index models: Mink, revised. U.S. Fish Wildl. Serv. Biol. Rep. 82(10.127). 23 pp. [First printed as: FWS/OBS-82/10.61, October 1983.]

Allen, A.W. 1987. Habitat suitability index models. Barred owl. U.S. Fish Wildl. Serv. Biol. Rep. 82(10.143). 17 pp.

Allen, A.W. and R.D. Hoffman. 1984. Habitat suitability index models: Muskrat. U.S. Fish Wildl. Serv. FWS/OBS-82/10.46. 27 pp.

Allen, A.W., P.A. Jordan, and J.W. Terrell. 1987. Habitat suitability index models: Moose, Lake Superior Region. U.S. Fish Wildl. Serv. Biol. Rep. 82(10.155). 47 pp.

Boyle, K.A. and T.T. Fendley. 1987. Habitat suitability index models: Bobcat. U.S. Fish Wildl. Serv. Biol. Rep. 82(10.147). 16 pp.

Carreker, R.G. 1985. Habitat suitability index models: Snowshoe hare. U.S. Fish Wildl. Serv. Biol. Rep. 82(10.101). 21 pp.

Rogers, L.L. and A.W. Allen. 1987. Habitat suitability index models: Black bear, Upper Great Lakes Region. U.S. Fish Wildl. Serv. Biol. Rep. 82(10.144). 54 pp.

Schroeder, R.L. 1982. Habitat suitability index models: Black-capped chickadee. U.S. Dept. Int., Fish Wildl. Serv. FWS/OBS-82/10.37. 12 pp.

Schroeder, R.L. 1982. Habitat suitability index models: Downy woodpecker. U.S. Dept. Int., Fish Wildl. Serv. FWS/OBS-82/10.38. 10 pp.

Schroeder, R.L. 1982. Habitat suitability index models: Pileated woodpecker. U.S. Dept. Int., Fish Wildl. Serv. FWS/OBS-82/10.39. 15 pp.

Sousa, P.J. 1982. Habitat suitability index models. Veery. U.S. Dept. Int., Fish Wildl. Serv. FWS/OBS-82/10.22. 12 pp.

Vana-Miller, S.L. 1987. Habitat suitability index models: Osprey. U.S. Fish Wildl. Serv. Biol. Rep. 82(10.154). 46 pp.

Appendix 3. Descriptions of MDNR policies relevant to SFM

Policy/procedure number and date	Date	Policy subject	Description
New Working Draft No. 1	February 27, 1998	Forest Management Division Management Team	The management team will coordinate division activities to fulfill its responsibilities as outlined in division's mission statement by: taking the lead in trying to sustain and improve the health, diversity, and productivity of forest resources and values; managing the state forest system for a broad array of products, services, and values in collaboration with the department's wildlife division and others; strengthening and diversifying Michigan's social and economic fabric through sustainable forest-based activities; and establishing and strengthening forest resource partnerships among broad representative interests.
Commission Policy 1033	January 1, 1977	Public Involvement in Activities of Department	Citizen participation and interest in the activities of the Department shall be encouraged in all possible ways.
Commission Policy 2002	March 11, 1993	Environmental Protection and Economic Development	Protection and enhancement of the natural environment is the Department's primary responsibility; however, innovative methods shall be sought to maximize benefits for both environmental and economic interests.
Commission Policy 2007	Date? (Supersedes 2111 of 1/1/77)	Deer Management	Manage deer by using management practices based on scientific research and surveys to achieve a quality deer herd that meets social, economic and recreational demands.
Commission Policy 2204	January 1, 1977	Reforestation	Reforestation will be done in accordance with overall forest resource management plans. Tree planting will be done only when artificial regeneration has been determined to be the most cost-effective method of achieving the best land use for the area involved.
Commission Policy 2207	May 11, 1979	Management of State Forests	The Department will consider all the values of forest resources and manage the total forest system under a management concept to ensure that it yields a combination of products, services and values that meet the economic and environmental needs of present and future generations. The Department will develop a comprehensive management plan for each designated state forest and each plan will be submitted to the NRC for approval.

[cont'd]

Appendix 3. Descriptions of MDNR policies relevant to SFM

Policy/procedure number and date	Date	Policy subject	Description
Department Procedure 2207.7	June 9, 1978	Forest Management	Outlines principles to be followed by Forest Management and Wildlife staff who jointly prepare and issue guidelines to direct foresters and game biologists in preparing forest management plans.
Commission Policy 2604	January 1, 1977	Lands - Public Use of State Lands Other Than Parks and Recreation Areas	State-owned lands, other than state parks and recreation areas, will be managed for purposes for which they are best suited and in a manner that will benefit the general public in the most prudent and accommodating manner. Protection and enhancement of the natural environment is to be a key consideration in all management efforts.
Commission Policy 4208	January 1, 1977	Burning - Prescribed	The Department may use prescribed burning under carefully planned and controlled conditions as a tool in wildlife and forestry management practices.
Commission Policy 4603	January 1, 1977	Pesticides and Other Toxic and/or Persistent Chemicals - Use of in Department Programs	The Department will assure that pesticides are used wisely, safely and only after all other feasible alternatives have been ruled out.
FMD Policy 112	December 1, 1981	On-Duty Staffing of Field Offices for Forest Fire Control	To meet control objectives and to provide for the safety and welfare of the public, the Forest Management Division is required to maintain certain numbers of trained personnel on duty.
FMD Policy 121	December 1, 1981	Safety Policy - FMD	The division will provide and maintain the safest possible level of operation for employees and public alike.
FMD Policy 122	January 25, 1988	Hazard Communication Program	This policy is intended to help forest managers ensure a safe work environment for Division employees.
FMD Policy 123	September 8, 1988	Use of Respirators Policy	When respirators are required, it is the responsibility of the employer to provide the correct respirator and to establish and maintain a protective program for the respiratory equipment and the user.

[cont'd]

Appendix 3. Descriptions of MDNR policies relevant to SFM

Policy/procedure number and date	Date	Policy subject	Description
FMD Policy 232	January 22, 1985	Off-road Vehicle Trails, Routes and Areas	The Forest Management Division will provide a system of managed trails, routes, use areas and camping facilities for the ORV user.
FMD Policy 241	February, 1994	Reforestation	New vegetative cover will be established within 5 years of stand removal.
FMD Policy 242	April 1, 1994	State Forest Nurseries	State forest nurseries produce reforestation stock for use on land administered by the MDNR. Production is designed to meet reforestation plans submitted by the field staff.
FMD Policy 243	April 1, 1994	Tree Improvement	The Forest Management Division will strive to plant trees of the highest possible genetic quality and to maintain a broad genetic base for each species.
FMD Policy 251	April 1, 1994	Disposal of Timber	State forest timber is prescribed for removal in accordance with management plans developed and approved at compartment reviews.
FMD Policy 261	July 1, 1983	Receipts and Remittances	The Forest Management Division will keep uniform records and prepare periodic summaries of volume sold and revenues. Records and summaries will be used for program monitoring.
FMD Policy 271	July 1, 1983	Forest Research and Experimentation	To test practices that best serve intensive forestry, the Division conducts some research and experimentation and participates in cooperative research projects with other divisions of the Department, educational institutions, and other government agencies.
FMD Policy 341	July 1, 1983	Municipal or Community Forest Act	Local public forests will be established for demonstration and other educational purposes.
FMD Policy 511	December 1, 1981	Five-Year Unit Fire Management Plans	The Forest Management Division will prepare Unit Fire Management Plans for each protection unit in the district. Plans are reviewed annually and revised every 5 years.
FMD Policy 521	December 1, 1981	Forest Fire Law	The Forest Management Division will ensure that forests and forest values are protected, the use of fire is regulated and penalties are provided for violation of the Forest Fire Law.

[cont'd]

Appendix 3. Descriptions of MDNR policies relevant to SFM

Policy/procedure number and date	Date	Policy subject	Description
FMD Policy 522	December 1, 1981	Control of Open Burning	Open burning will not be allowed except with special permission. No burning will be allowed in areas adjacent to forest lands when the ground is not snow covered, without a permit from the MDNR.
FMD Policy 534	December 1, 1981	Reporting of Going Fires	Timely and concise reporting of fire-weather conditions and fire problems is required for the effective use of regional and state resources. The division is responsible for providing fire information to the Executive Office, news media and the general public.
FMD Policy 543	December 1, 1981	Safe Suppression of Power Line and Energized Area Fires	All personnel will use extreme caution when working on power-line fires and will carefully follow outlined procedures when working on any fire where energized conditions may exist.
FMD Policy 581	December 1, 1981	Prescribed Burning	Prescribed burning will be used under carefully planned and controlled conditions as a tool in implementing wildlife and forestry management practices.
FMD Policy 591	September 8, 1988	Forest Pest Management Policy	The Forest Management Division is responsible for the detection, evaluation and non-regulatory control of all forest pests on state forest lands administered by the MDNR. Forest pest management is used to reduce losses due to pests and to increase and enhance forest resource production and utilization.
FMD Policy 592	April 1, 1987	Pesticide Use Policy	Pesticides will be considered as a method of pest control. Label directions will be followed precisely, and safety precautions will be employed to protect human health and the environment.
FMD Policy 593	September 8, 1988	Gypsy Moth Management Policy	Gypsy moth will be directly suppressed when high-value recreation areas or timber growth and yield are threatened by gypsy moth defoliation.
FMD Policy 611	December 1, 1981	Equipment Preventive Maintenance	All forest management equipment will be maintained to ensure its safe and dependable operation.
FMD Policy 621	December 1, 1981	Equipment Preparation and Operation	The Forest Management Division is responsible for the safe preparation, operation and maintenance of departmental equipment.

Appendix 4. Policies and procedures that show commitment to SFM according to CSA standards

Policy/procedure number and date	Policy subject	Achieving and maintaining SFM	Meeting/ exceeding all regulatory standards, policies and interpretation requirements	Acting responsibly with respect to all forest and social values	Health and safety of employees and the public	Research/ science and technology	NRC approval	Public participation
New: Working Draft No. 1 February 27, 1998	Forest Management Division Management Team	Under Part B, line 8		Under Part B, lines 10-11, 12-13, and 14-16				
Commission Policy 1033 January 1, 1977	Public Involvement in Activities of Department							Under <i>General Policy</i> , lines 1-2 and 5-9
Commission Policy 2002 March 11, 1993	Environmental Protection and Economic Development			Under <i>General Policy</i> , lines 3-5 and 10-11	Under <i>General Policy</i> , 2 nd paragraph, lines 4-7	Under <i>General Policy</i> , 2 nd paragraph, lines 7-11		Under <i>General Policy</i> , lines 1-3
Commission Policy 2007 Date? (Supersedes 2111 of 1/1/77)	Deer Management			Under <i>General Policy</i> , lines 4-6 and 7-8	Under <i>General Policy</i> , lines 4-6	Under <i>General Policy</i> , lines 1-2		
Commission Policy 2204 January 1, 1977	Reforestation	Under <i>General Policy</i> , lines 4-9						
Commission Policy 2207 May 11, 1979	Management of State Forests	Under <i>General Policy</i> , lines 4-7		Under <i>General Policy</i> , lines 1-3 and 7-9				

[cont'd]

Appendix 4. Policies and procedures that show commitment to SFM according to CSA standards

Policy/procedure number and date	Policy subject	Achieving and maintaining SFM	Meeting/ exceeding all regulatory standards, policies and interpretation requirements	Acting responsibly with respect to all forest and social values	Health and safety of employees and the public	Research/ science and technology	NRC approval	Public participation
Department Procedure 2207.7 June 9, 1978	Forest Management	#2, #4 (lines 1-5), #4e, and #11		Line 2, and #2, #7, and #10		#6		
Commission Policy 2604 January 1, 1977	Lands - Public Use of State Lands Other Than Parks and Recreation Areas			Under <i>General Policy</i> , lines 1-3	Under <i>Specific Policies</i> , #4			
Commission Policy 2703 March 9, 1978	Natural Rivers	Under <i>General Policy</i> , 2 nd paragraph, lines 2-4		Under <i>Preamble</i> , lines 5-7; under <i>General Policy</i> , 1 st paragraph, lines 1-5.				Under <i>General Policy</i> , 2 nd paragraph, lines 11-13; under <i>Specific Policies</i> , #6.
Department Procedure 2703.3 March 9, 1978	Natural Rivers	II.A, II.C, II.D, II.I, II.J, II.L		I.A.2, II.A.#s 1,2,3,4 and 8, II.E, II.F, II.H, II.M				
Commission Policy 2704 June 8, 1979	Wilderness and Natural Areas			Under <i>Preamble</i> , lines 1-3				
Commission Policy 4208 January 1, 1977	Burning - Prescribed	Entire <i>Preamble</i> and <i>General Policy</i>						

[cont'd]

Appendix 4. Policies and procedures that show commitment to SFM according to CSA standards

Policy/procedure number and date	Policy subject	Achieving and maintaining SFM	Meeting/ exceeding all regulatory standards, policies and interpretation requirements	Acting responsibly with respect to all forest and social values	Health and safety of employees and the public	Research/ science and technology	NRC approval	Public participation
Commission Policy 4603 March 16, 1979	Pesticides and Other Toxic and/or Persistent Chemicals - Use of in Department Programs			Under <i>General Policy</i> , lines 3-12	Under <i>General Policy</i> , 1 st paragraph, lines 3-12 and 2 nd paragraph, lines 9-11			
FMD Policy 112 December 1, 1981	On-Duty Staffing of Field Offices for Forest Fire Control				Under Part C, 2 nd paragraph, lines 1-4			
FMD Policy 121 December 1, 1981	Safety Policy - FMD				Under Part B, lines 1-2			
FMD Policy 122 January 25, 1988	Hazard Communication Program				Under Part C, lines 3-4			
FMD Policy 123 September 8, 1988	Use of Respirators Policy				Part C			
FMD Policy 232 January 22, 1985	Off-road Vehicle Trails, Routes and Areas			Under Part B, lines 1-5 and #s 1-6	Under Part B, #3			
FMD Policy 241 February, 1994	Reforestation	Under Part B, lines 1-3; Under Part C, lines 12-13		Under Part B, lines 16-17, and 21-24				

[cont'd]

Appendix 4. Policies and procedures that show commitment to SFM according to CSA standards

Policy/procedure number and date	Policy subject	Achieving and maintaining SFM	Meeting/ exceeding all regulatory standards, policies and interpretation requirements	Acting responsibly with respect to all forest and social values	Health and safety of employees and the public	Research/ science and technology	NRC approval	Public participation
FMD Policy 242 April 1, 1994	State Forest Nurseries	Under Part B, lines 1-2; Under Part C, lines 1-2		Under Part B, lines 1-2; Under Part C, lines 1-2				
FMD Policy 243 April 1, 1994	Tree Improvement	Under Part B, lines 1-6				Under Part D, lines 1-5		
FMD Policy 251 April 1, 1994	Disposal of Timber	Under Part B, 5 th paragraph, lines 1-3		Under Part C, 2 nd paragraph, lines 1-4 and 3 rd paragraph, lines 1-4; Under Part D, #1, lines 2-5 and #2, lines 4-7		Under Part D, #2i, <i>Experimental Plots and Areas</i> , lines 1-25		
FMD Policy 261 July 1, 1983	Receipts and Remittances	Under Part B, lines 1-5		Under Part B, lines 1-5				
FMD Policy 271 July 1, 1983	Forest Research and Experimentation					Under Part B, lines 1-6		
FMD Policy 341 July 1, 1983	School and Municipal Forests			Under Part C, lines 3-5				
FMD Policy 511 December 1, 1981	5-Year Unit Fire Management Plans			Under Part C, lines 1-3				

[cont'd]

Appendix 4. Policies and procedures that show commitment to SFM according to CSA standards

Policy/procedure number and date	Policy subject	Achieving and maintaining SFM	Meeting/ exceeding all regulatory standards, policies and interpretation requirements	Acting responsibly with respect to all forest and social values	Health and safety of employees and the public	Research/ science and technology	NRC approval	Public participation
FMD Policy 521 December 1, 1981	Forest Fire Law			Under Part A, lines 1-6; Under Part B, lines 1-2	Under Part A, lines 1-6; Under Part B, lines 1-2			
FMD Policy 522 December 1, 1981	Control of Open Burning				Under Part B, lines 1-5; Under Part C, lines 1-2			
FMD Policy 534 December 1, 1981	Reporting of Going Fires			Under Part C, #s 1 and 2	Under Part C, #s 1 and 2			
FMD Policy 543 December 1, 1981	Safe Suppression of Power Line and Energized Area Fires				Under Part B, lines 1-3			
FMD Policy 581 December 1, 1981	Prescribed Burning	Under Part C, lines 1-5			Under Part C, lines 3-5			
FMD Policy 591 September 8, 1988	Forest Pest Management Policy	Under Part C, lines 1-5			Under Part C, lines 1-5			
FMD Policy 592 April 1, 1987	Pesticide Use Policy	Under Part C, lines 4-9			Under Part B, lines 5-7; Under Part D, 3d, lines 10-25	Under Part D, #1, lines 1-3		Under Part D, 3c, lines 1-7

[cont'd]

Appendix 4. Policies and procedures that show commitment to SFM according to CSA standards

Policy/procedure number and date	Policy subject	Achieving and maintaining SFM	Meeting/ exceeding all regulatory standards, policies and interpretation requirements	Acting responsibly with respect to all forest and social values	Health and safety of employees and the public	Research/ science and technology	NRC approval	Public participation
FMD Policy 593 September 8, 1988	Gypsy Moth Management Policy	Under Part B, 2 nd paragraph, lines 7-10		Under Part B, 2 nd paragraph, lines 7-10; Under <i>Sociological Impact</i> , lines 10-12; Under <i>Economic Impact</i> , #s 5-7				
FMD Policy 611 December 1, 1981	Equipment Preventive Maintenance				Under Part B, lines 1-9			
FMD Policy 621 December 1, 1981	Equipment Preparation and Operation				Under Part C, lines 1-3			

Appendix 5. Evaluation of MDNR mission statements by MDNR staff. Responses to the following questions were gathered during a workshop with MDNR staff on March 31, 1998.

Table A5.1. Summary of responses from the 17 workshop participants to the question, "How familiar are you with the mission statements of the following departments/divisions?" Answers were ranked on a scale of 1-5 (1: Very familiar; 5: Never heard of it).

Department/Division	1 - <i>Very familiar</i>	2	3	4	5 - <i>Never heard of it</i>
MDNR	4	9	4	0	0
Forest Management Division	6	5	4	2	0
Wildlife Division	5	1	3	5	3
Fisheries Division	2	1	1	4	9

Table A5.2. Summary of responses from the 17 workshop participants to the question, "How well do you feel you understand the mission statements of the following departments/divisions?" Answers were ranked on a scale of 1-5 (1: Very well; 5: Not at all).

Department/Division	1 - <i>Very well</i>	2	3	4	5 - <i>Not at all</i>
MDNR	12	3	2	0	0
Forest Management Division	8	6	3	0	0
Wildlife Division	8	3	4	2	0
Fisheries Division	3	3	6	5	0

Table A5.3. Summary of responses from the 17 workshop participants to the question, "How much do the mission statements of the following departments/divisions affect your daily work?" Answers were ranked on a scale of 1-5 (1: A lot; 5: Not at all).

	1 - A lot	2	3	4	5 - Not at all
MDNR	5	4	5	3	0
Forest Management Division	5	6	3	3	0
Wildlife Division	4	3	8	1	1
Fisheries Division	2	3	4	4	4

Table A5.4. Summary of responses from 8 of the participants in Group 1 to the question, "Could the mission statements of the following departments/divisions be more relevant?" Answers ranked on a scale of 1-5 (1: Could be more relevant; 5: Relevant as is).

Department/Division	1 - Could be more relevant	2	3	4	5 - Relevant as is
MDNR	1	0	3	3	1
Forest Management Division	0	0	4	3	1
Wildlife Division	1	0	5	2	0
Fisheries Division	1	1	2	3	1

Appendix 6. Evaluation by internal stakeholders of policies and procedures. Responses to the following questions were gathered during a workshop with MDNR staff on March 31, 1998.

Table A6.1. Summary of responses from the 17 participants to the question "How familiar are the following policies to you?" Answers were ranked on a scale of 1-5 (1: Very familiar, 5: Never heard of it).

Policy/Procedure Number and Date	Policy Subject	1	2	3	4	5	No response
New: Working Draft No. 1 February 27, 1998	Forest Management Division Management Team	1	2	3	6	5	
Commission Policy 1033 January 1, 1977	Public Involvement in Activities of Department	2	3	4	4	4	
Commission Policy 2002 March 11, 1993	Environmental Protection and Economic Development	1	1	0	8	7	
Commission Policy 2007 Date? (Supersedes 2111 of 1/1/77)	Deer Management	5	2	1	5	4	
Commission Policy 2204 January 1, 1977	Reforestation	3	3	0	5	6	
Commission Policy 2207 May 11, 1979	Management of State Forests	4	2	4	4	3	
Department Procedure 2207.7 June 9, 1978	Forest Management	2	2	4	4	4	1
Commission Policy 2604 January 1, 1977	Lands - Public Use of State Lands Other Than Parks and Recreation Areas	4	2	3	5	3	
Commission Policy 4208 January 1, 1977	Burning - Prescribed	6	5	2	3	1	

[cont'd]

Table A6.1. Summary of responses from the 17 participants to the question "How familiar are the following policies to you?" Answers were ranked on a scale of 1-5 (1: Very familiar, 5: Never heard of it).

Policy/Procedure Number and Date	Policy Subject	1	2	3	4	5	No response
Commission Policy 4603 March 16, 1979	Pesticides and Other Toxic and/or Persistent Chemicals - Use of in Department Programs	3	2	4	4	4	
FMD Policy 112 December 1, 1981	On-Duty Staffing of Field Offices for Forest Fire Control	8	6	0	1	2	
FMD Policy 121 December 1, 1981	Safety Policy - FMD	3	5	2	3	4	
FMD Policy 122 January 25, 1988	Hazard Communication Program	5	3	3	1	5	
FMD Policy 123 September 8, 1988	Use of Respirators Policy	3	2	4	3	5	
FMD Policy 232 January 22, 1985	Off-road Vehicle Trails, Routes and Areas	4	4	2	3	2	2
FMD Policy 241 February, 1994	Reforestation	4	4	1	2	6	
FMD Policy 242 April 1, 1994	State Forest Nurseries	3	3	2	2	5	2
FMD Policy 243 April 1, 1994	Tree Improvement	1	2	3	3	7	1
FMD Policy 251 April 1, 1994	Disposal of Timber	6	6	1	0	4	
FMD Policy 261 July 1, 1983	Receipts and Remittances	6	3	5	0	2	1
FMD Policy 271 July 1, 1983	Forest Research and Experimentation	1	2	0	4	10	
FMD Policy 341 July 1, 1983	School and Municipal Forests	4	1	3	3	5	1
FMD Policy 511 December 1, 1981	5-Year Unit Fire Management Plans	7	3	2	3	2	
FMD Policy 521 December 1, 1981	Forest Fire Law	7	6	2	1	1	

[cont'd]

Table A6.1. Summary of responses from the 17 participants to the question "How familiar are the following policies to you?" Answers were ranked on a scale of 1-5 (1: Very familiar, 5: Never heard of it).

Policy/Procedure Number and Date	Policy Subject	1	2	3	4	5	No response
FMD Policy 522 December 1, 1981	Control of Open Burning	10	4	1	1	1	
FMD Policy 534 December 1, 1981	Reporting of Going Fires	7	4	1	1	4	
FMD Policy 543 December 1, 1981	Safe Suppression of Power Line and Energized Area Fires	3	2	2	2	8	
FMD Policy 581 December 1, 1981	Prescribed Burning	6	5	2	2	2	
FMD Policy 591 September 8, 1988	Forest Pest Management Policy	2	6	3	2	4	
FMD Policy 592 April 1, 1987	Pesticide Use Policy	2	5	4	2	4	
FMD Policy 593 September 8, 1988	Gypsy Moth Management Policy	1	1	3	5	7	
FMD Policy 611 December 1, 1981	Equipment Preventive Maintenance	7	3	2	1	4	
FMD Policy 621 December 1, 1981	Equipment Preparation and Operation	6	2	4	1	4	

Table A6.2. Summary of responses from the 17 participants to the question "How well do you feel you understand the following policies?" Answers were ranked on a scale of 1-5 (1: Very well, 5: Not at all).

Policy/Procedure Number and Date	Policy Subject	1	2	3	4	5	No response
New: Working Draft No. 1 February 27, 1998	Forest Management Division Management Team	3	6	4	1	3	
Commission Policy 1033 January 1, 1977	Public Involvement in Activities of Department	4	7	4	0	2	
Commission Policy 2002 March 11, 1993	Environmental Protection and Economic Development	4	3	4	3	3	
Commission Policy 2007 Date? (Supersedes 2111 of 1/1/77)	Deer Management	7	5	1	3	1	
Commission Policy 2204 January 1, 1977	Reforestation	8	1	4	2	2	
Commission Policy 2207 May 11, 1979	Management of State Forests	8	3	2	3	1	
Department Procedure 2207.7 June 9, 1978	Forest Management	5	2	4	3	2	1
Commission Policy 2604 January 1, 1977	Lands - Public Use of State Lands Other Than Parks and Recreation Areas	7	4	4	1	1	
Commission Policy 4208 January 1, 1977	Burning - Prescribed	12	4	0	1	0	
Commission Policy 4603 March 16, 1979	Pesticides and Other Toxic and/or Persistent Chemicals - Use of in Department Programs	7	5	1	2	2	

[cont'd]

Table A6.2. Summary of responses from the 17 participants to the question "How well do you feel you understand the following policies?" Answers were ranked on a scale of 1-5 (1: Very well, 5: Not at all).

Policy/Procedure Number and Date	Policy Subject	1	2	3	4	5	No response
FMD Policy 112 December 1, 1981	On-Duty Staffing of Field Offices for Forest Fire Control	9	6	1	1	0	
FMD Policy 121 December 1, 1981	Safety Policy - FMD	13	0	2	1	1	
FMD Policy 122 January 25, 1988	Hazard Communication Program	8	2	4	1	2	
FMD Policy 123 September 8, 1988	Use of Respirators policy	4	7	3	0	3	
FMD Policy 232 January 22, 1985	Off-road Vehicle Trails, Routes and Areas	6	4	3	1	1	2
FMD Policy 241 February, 1994	Reforestation	10	1	1	4	1	
FMD Policy 242 April 1, 1994	State Forest Nurseries	7	3	2	1	2	2
FMD Policy 243 April 1, 1994	Tree Improvement	4	4	2	1	4	2
FMD Policy 251 April 1, 1994	Disposal of Timber	11	1	4	0	0	1
FMD Policy 261 July 1, 1983	Receipts and Remittances	6	4	4	0	2	1
FMD Policy 271 July 1, 1983	Forest Research and Experimentation	5	3	4	3	2	
FMD Policy 341 July 1, 1983	School and Municipal Forests	4	5	4	1	2	1
FMD Policy 511 December 1, 1981	5-Year Unit Fire Management Plans	6	8	0	2	1	
FMD Policy 521 December 1, 1981	Forest Fire Law	9	4	1	3	0	
FMD Policy 522 December 1, 1981	Control of Open Burning	12	3	2	0	0	
FMD Policy 534 December 1, 1981	Reporting of Going Fires	9	3	1	2	2	

[cont'd]

Table A6.2. Summary of responses from the 17 participants to the question "How well do you feel you understand the following policies?" Answers were ranked on a scale of 1-5 (1: Very well, 5: Not at all).

Policy/Procedure Number and Date	Policy Subject	1	2	3	4	5	No response
FMD Policy 543 December 1, 1981	Safe Suppression of Power Line and Energized Area Fires	5	5	1	1	5	
FMD Policy 581 December 1, 1981	Prescribed Burning	11	4	1	0	1	
FMD Policy 591 September 8, 1988	Forest Pest Management Policy	5	5	4	1	2	
FMD Policy 592 April 1, 1987	Pesticide Use Policy	8	3	1	3	2	
FMD Policy 593 September 8, 1988	Gypsy Moth Management Policy	7	3	1	2	4	
FMD Policy 611 December 1, 1981	Equipment Preventive Maintenance	9	4	3	0	1	
FMD Policy 621 December 1, 1981	Equipment Preparation and Operation	9	4	1	1	2	

Table A6.3. Summary of responses from the 17 participants to the question "How much do the following policies affect your daily work?" Answers were ranked on a scale of 1-5 (1: Very much, 5: Not at all).

Policy/Procedure Number and Date	Policy Subject	1	2	3	4	5	No response
New: Working Draft No. 1 February 27, 1998	Forest Management Division Management Team	2	6	3	1	5	
Commission Policy 1033 January 1, 1977	Public Involvement in Activities of Department	2	6	5	2	1	1
Commission Policy 2002 March 11, 1993	Environmental Protection and Economic Development	2	2	6	2	4	1
Commission Policy 2007 Date? (Supersedes 2111 of 1/1/77)	Deer Management	4	3	2	4	4	
Commission Policy 2204 January 1, 1977	Reforestation	4	4	3	3	3	
Commission Policy 2207 May 11, 1979	Management of State Forests	6	5	2	1	3	
Department Procedure 2207.7 June 9, 1978	Forest Management	7	4	3	0	3	
Commission Policy 2604 January 1, 1977	Lands - Public Use of State Lands Other Than Parks and Recreation Areas	6	5	3	0	3	
Commission Policy 4208 January 1, 1977	Burning - Prescribed	6	6	1	1	3	
Commission Policy 4603 March 16, 1979	Pesticides and Other Toxic and/or Persistent Chemicals - Use of in Department Programs	1	1	8	3	4	

[cont'd]

Table A6.3. Summary of responses from the 17 participants to the question "How much do the following policies affect your daily work?" Answers were ranked on a scale of 1-5 (1: Very much, 5: Not at all).

Policy/Procedure Number and Date	Policy Subject	1	2	3	4	5	No response
FMD Policy 112 December 1, 1981	On-Duty Staffing of Field Offices for Forest Fire Control	3	5	3	1	3	2
FMD Policy 121 December 1, 1981	Safety Policy - FMD	8	6	1	0	2	
FMD Policy 122 January 25, 1988	Hazard Communication Program	5	4	4	1	3	
FMD Policy 123 September 8, 1988	Use of Respirators Policy	2	0	1	3	11	
FMD Policy 232 January 22, 1985	Off-road Vehicle Trails, Routes and Areas	1	3	6	3	2	2
FMD Policy 241 February, 1994	Reforestation	4	3	5	1	3	1
FMD Policy 242 April 1, 1994	State Forest Nurseries	2	2	2	2	7	2
FMD Policy 243 April 1, 1994	Tree Improvement	1	1	2	2	9	2
FMD Policy 251 April 1, 1994	Disposal of Timber	11	1	3	0	1	1
FMD Policy 261 July 1, 1983	Receipts and Remittances	3	4	4	1	3	2
FMD Policy 271 July 1, 1983	Forest Research and Experimentation	1	0	4	2	10	
FMD Policy 341 July 1, 1983	School and Municipal Forests	1	1	0	6	8	1
FMD Policy 511 December 1, 1981	5-Year Unit Fire Management Plans	1	3	2	7	4	
FMD Policy 521 December 1, 1981	Forest Fire Law	4	4	5	2	2	
FMD Policy 522 December 1, 1981	Control of Open Burning	2	5	4	2	3	1
FMD Policy 534 December 1, 1981	Reporting of Going Fires	2	3	4	3	4	1

[cont'd]

Table A6.3. Summary of responses from the 17 participants to the question "How much do the following policies affect your daily work?" Answers were ranked on a scale of 1-5 (1: Very much, 5: Not at all).

Policy/Procedure Number and Date	Policy Subject	1	2	3	4	5	No response
FMD Policy 543 December 1, 1981	Safe Suppression of Power Line and Energized Area Fires	2	1	1	4	8	1
FMD Policy 581 December 1, 1981	Prescribed Burning	2	8	4	0	3	
FMD Policy 591 September 8, 1988	Forest Pest Management Policy	1	3	6	3	4	
FMD Policy 592 April 1, 1987	Pesticide Use Policy	1	3	3	3	7	
FMD Policy 593 September 8, 1988	Gypsy Moth Management Policy	0	2	1	3	11	
FMD Policy 611 December 1, 1981	Equipment Preventive Maintenance	4	3	5	0	5	
FMD Policy 621 December 1, 1981	Equipment Preparation and Operation	4	4	3	1	5	

Table A6.4. For each policy, the number of participants (out of a total of 16) who chose that policy as being particularly useful is recorded.

Policy/Procedure Number and Date	Policy Subject	Most useful policies
New: Working Draft No. 1 February 27, 1998	Forest Management Division Management Team	–
Commission Policy 1033 January 1, 1977	Public Involvement in Activities of Department	6
Commission Policy 2002 March 11, 1993	Environmental Protection and Economic Development	7
Commission Policy 2007 Date? (Supersedes 2111 of 1/1/77)	Deer Management	5
Commission Policy 2204 January 1, 1977	Reforestation	5
Commission Policy 2207 May 11, 1979	Management of State Forests	5
Department Procedure 2207.7 June 9, 1978	Forest Management	6
Commission Policy 2604 January 1, 1977	Lands - Public Use of State Lands Other Than Parks and Recreation Areas	4
Commission Policy 4208 January 1, 1977	Burning - Prescribed	11
Commission Policy 4603 March 16, 1979	Pesticides and Other Toxic and/or Persistent Chemicals - Use of in Department Programs	6
FMD Policy 112 December 1, 1981	On-Duty Staffing of Field Offices for Forest Fire Control	9
FMD Policy 121 December 1, 1981	Safety Policy - FMD	10
FMD Policy 122 January 25, 1988	Hazard Communication Program	5
FMD Policy 123 September 8, 1988	Use of Respirators Policy	4
FMD Policy 232 January 22, 1985	Off-road Vehicle Trails, Routes and Areas	5
FMD Policy 241 February, 1994	Reforestation	6
FMD Policy 242 April 1, 1994	State Forest Nurseries	3
FMD Policy 243 April 1, 1994	Tree Improvement	3
FMD Policy 251 April 1, 1994	Disposal of Timber	14
FMD Policy 261 July 1, 1983	Receipts and Remittances	8
FMD Policy 271 July 1, 1983	Forest Research and Experimentation	2
FMD Policy 341 July 1, 1983	School and Municipal Forests	1
FMD Policy 511 December 1, 1981	5-Year Unit Fire Management Plans	5
FMD Policy 521 December 1, 1981	Forest Fire Law	11

[cont'd]

Table A6.4. For each policy, the number of participants (out of a total of 16) who chose that policy as being particularly useful is recorded.

Policy/Procedure Number and Date	Policy Subject	Most useful policies
FMD Policy 522 December 1, 1981	Control of Open Burning	10
FMD Policy 534 December 1, 1981	Reporting of Going Fires	9
FMD Policy 543 December 1, 1981	Safe Suppression of Power Line and Energized Area Fires	4
FMD Policy 581 December 1, 1981	Prescribed Burning	11
FMD Policy 591 September 8, 1988	Forest Pest Management Policy	3
FMD Policy 592 April 1, 1987	Pesticide Use Policy	4
FMD Policy 593 September 8, 1988	Gypsy Moth Management Policy	2
FMD Policy 611 December 1, 1981	Equipment Preventive Maintenance	9
FMD Policy 621 December 1, 1981	Equipment Preparation and Operation	7

This report was completed as part of the requirements for a project funded by the Great Lakes Environmental Protection Fund. The objective of the project was to develop a new forest management planning system for the Lake Superior State Forest that meets sustainable forest management standards, specifically those of the Canadian Standards Association and the Forest Stewardship Council.

Project Partners:

Michigan Department of Natural Resources

Mater Engineering, Ltd.

Smartwood

BioForest Technologies Inc.

Craig Howard

Anne Hayes

Brian Callaghan (Callaghan & Associates Inc.)

Tom Clark (CMC Consulting)

Reports generated by this project include:

Project Summary: The Lake Superior State Forest Sustainable Forest Management Pilot Project

An Assessment of the Michigan Department of Natural Resources' Commitment to Sustainable Forest Management

The Lake Superior State Forest: A Description

Michigan Department of Natural Resources Operations Inventory: Survey Results

Roles and Responsibilities for Forest Management Planning in the Lake Superior State Forest

Public Participation in Forest Management Planning in the Lake Superior State Forest: Finding the Right Pathway

Establishing Criteria and Indicators for the Lake Superior State Forest

Workshop I Summary: Values and Indicators of the Lake Superior State Forest

Workshop II Summary: Establishing Targets, Practices and Responsibilities for the Indicators of the Lake Superior State Forest

Modeling Forest Management on the Lake Superior State Forest

Wildlife Habitat Projections for 15 Species in the Lake Superior State Forest

Risk Assessment of Forest Management for the Lake Superior State Forest

A Forest Management Planning Guide for the Lake Superior State Forest

Further information on this report or any of the reports listed may be obtained from:



BioForest Technologies Inc.
105 Bruce Street, Sault Ste. Marie, ON P6A 2X6
Phone: 705-942-5824 Fax: 705-942-8829
Email: bforest@soonet.ca